TREE AND SHRUB FLOOD TOLERANCE

The table below presents a summary of research results for both the Lower Mississippi Valley and the Missouri River as compiled by the USDA Forestry Service. Since classification is relative, flood tolerances are best viewed as overlapping from one tolerance category to the next. The tolerance categories should be interpreted as follows:

Very Tolerant -- Able to survive deep, prolonged flooding for more than one year.

Tolerant -- Able to survive deep flooding for one growing season, with significant death occurring if flooding is repeated the following year.

Somewhat Tolerant -- Able to survive flooding or saturated soils from 30 consecutive days during the growing season.

Intolerant -- Unable to survive more than a few days of flooding during the growing season without major death.

Relative Tolerance of Trees and Shrubs to Flooding During the Growing Season, Lower Mississippi Valley and Missouri River Divisions

(Source: Whitlow and Harris, 1979)

Very Tolerant

- *Water hickory
- Overcup oak
- Buttonbush
- Swamp privet
- Black willow
- Deciduous holly
- *Water tupelo
- Waterelm
- Pecan
- *Nuttall oak
- Waterlocust
- *Baldcypress
- Green ash

Somewhat Tolerant

- *Swamp white oak
- Silver maple
- Southern red oak
- Downy hawthorn
- *Willow oak
- American holly
- American elm
- Red elm
- Bur oak
- *Water oak
- Hazel alder
- Honeylocust
- Winged elm
- Blackgum
- Sycamore

Tolerant

- Boxelder
- *Red maple
- Silver maple
- *Pecan
- Sugarberry
- Eastern cottonwood
- *Shingle oak
- White ash
- Green ash
- Sweetgum
- Sycamore
- *Pin oak
- Hackberry
- *Persimmon

Intolerant

- Bitternut hickory
- Flowering dogwood
- Black cherry
- Shellbark hickory
- Shagbark hickory
- Mockernut hickory
- Kentucky coffeetree
- Blackjack oak
- Red mulberry
- Shummard oak
- Wild plum
- White oak
- Black walnut
- Red oak
- Post oak
- Black oak
- Redbud
- Sassafras
- Loblolly pine
- Shortleaf pine

Except in cases where flood waters persist for months or where trees were injured by the sheer force of the flood waters, most trees that experienced flood conditions should survive. It may or may not be too late by the time you read this but beware of so-called "tree experts" recommending rescue treatments for affected trees. Fertilization is not a cure for root injury caused by flooding!

FROM -- Iowa State Horticulture and Home Pest Newsletter by Jeff Iles and [illegible] thanks to Dr. Jack Slusher, University of Missouri Extension State Forestry S[illegible]